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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO.         | CONFIRMATION NO.          |
|--|-------------|-----------------------|-----------------------------|---------------------------|
| 10/608,969   | 06/27/2003  | Michael John Gronseth | S01.12-0985/STL<br>11274.00 | 7433                      |
| 7590   | 03/07/2005  |                       |                             | EXAMINER<br>CHEN, TIANJIE |
| Deirdre Megley Kvale<br>Westman, Champlin & Kelly<br>Suite 1600<br>900 Second Avenue South<br>Minneapolis, MN 55402-3319 |             |                       | ART UNIT<br>2652            | PAPER NUMBER              |
| DATE MAILED: 03/07/2005  |             |                       |                             |                           |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                          |                     |
|------------------------------|--------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b>   | <b>Applicant(s)</b> |
|                              | 10/608,969               | GRONSETH ET AL.     |
|                              | Examiner<br>Tianjie Chen | Art Unit<br>2652    |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6 and 9-12 is/are rejected.
- 7) Claim(s) 7 and 8 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date: _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20030627</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

### ***Non-Final Rejection***

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 2, 4-6, 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamakura et al (US 2003/0227716).

Claim 1, Yamakura et al shows a method for fabricating a slider in [0116] to [0120] and Figs. 4 and 10A including the steps of: fabricating a plurality of transducers (step 100) on a wafer including an overcoat layer 15 ([0067], line 4); etching a trench in the overcoat layer (step 106, [0123]); and slicing the wafer into slider bars ([0018]) having a plurality of sliders formed therealong and fabricating air bearing surfaces for the plurality of sliders along the slider bar having a trailing edge defined by a recessed surface of the etched trench ([0123] to [0124]).

Claim 6, as described above, Yamakura et al shows a method for fabricating a slider including the step of: fabricating a trench having a recessed trench surface spaced from a trailing end surface of the slider to form a trailing edge of a raised bearing surface of the slider defined by an etched depth of the trench of the slider.

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Claim 9, Yamakura et al shows a head including: a slider in Fig. 4 having a transducer portion 7 fabricated proximate a trailing end of the slider 14+15; and a trench (the recessed portion next to the numeral 8) in an overcoat layer 15 of the transducer portion forming a trailing edge of the slider and the trailing edge having a recessed dimension relative to a trailing end surface of the slider defined by an etched depth of the trench of the slider ([0123]).

Claims 2 and 10, Yamakura et al further shows that the overcoat layer 15 is an alumina layer ([0067], line 4).

Claim 11, Yamakura et al further shows that the transducer portion includes inductive and/or magnetoresistive transducer elements ([0059], lines 5-7).

Claims 4 and 12, Yamakura et al further shows that the trench forms a trailing edge of a raised bearing surface of the slider (Fig. 4).

Claim 5, Yamakura et al further shows a step of: planarizing the slider or wafer (step 102, [0119]) prior to etching the trench (step 106, [0123]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

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ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamakura et al in view of Horr et al (US Re.30601).

Yamakura et al further show the air bearing surfaces of the plurality of sliders along the slider bar are formed using a masking process ([023])but fails to show a photoalignment masking process.

Horr et al show a photoalignment masking processing being used in fabrication of a wafer (column 2, lines 19-20).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to apply the photoalignment masking process in fabrication. The rationale is as follows: Yamakura et al shows a mask process used in fabrication on a wafer. Horr teaches that using of a photoalignment masking process can avoid physically touching with any portion of the photoalignment tool thus avoiding the possibility of contamination of the surface (Column 2, lines 27-32). One of ordinary skill in the art would have been motivated to use the photoalignment mask process for avoiding contamination of the surface.

#### ***Allowable Subject Matter***

3. Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

- With regard to claim 7, as the closest reference, Yamakura et al (US 2003/0227716) shows a method for fabricating a slider including the step of:

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fabricating a trench having a recessed trench surface spaced from a trailing end surface of the slider to form a trailing edge of a raised bearing surface of the slider defined by an etched depth of the trench of the slider; **but fails to show** that the trench is fabricated at a wafer level prior to slicing the wafer into slider bars to form a plurality of sliders therealong.

- Applicant asserts that the trailing edge is fabricated on all the heads at the wafer level, which is more efficient and less costly than fabrication at the slider bar level (Specification, p. 6, lines 16-18).

***Conclusion***

4. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Tianjie Chen*  
TIANJIE CHEN  
PRIMARY EXAMINER